

## **CLAIMS**

What is claimed is:

1. A dual-locked, torqued, error proofed for installation, chuck free helical head restraint guide comprising:  
  
5 a head restraint guide assembly further comprising at least two stems, a button sub assembly, and bezel; said stems further comprising a helix at one end of each stem and a multi-point socket head, an open wrench flat, and/or an internal torx head and crush ribs at the other end;  
  
a motor vehicle passenger seat comprising upper cross member of back  
10 frame with upper and lower openings; and  
  
a head restraint assembly further comprising head restraint posts and a head restraint pad.
2. The dual-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 1, wherein each of said stems are dropped in any  
15 orientation into corresponding openings on said upper cross member of back frame; said stems bind said upper cross member of back frame against said crush ribs.
3. The dual-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 2, wherein said stems with said helix are screwed to a stop into said corresponding openings on said upper cross member of back frame before  
20 foam and trim are assembled on said motor vehicle seat.
4. The dual-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 2, wherein said button sub-assembly and bezel are error

proofed for installation over said stems in said upper cross member of back frame after said seat of motor vehicle is foamed and trimmed.

5. The dual-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 1, wherein said head restraint assembly is inserted  
5 through holes in said head restraint guide assembly; said head restraint guide locks on both posts of said head restraint assembly.

6. The dual-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 1, wherein said button sub-assembly further comprises a button frame and at least one spring.

10 7. The dual-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 6, wherein said at least one spring further comprises an adjustment locking spring and a spring to prevent headrest removal without a tool.

8. The dual-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 6, wherein said springs are pre-assembled to said button  
15 sub-assembly and snap fitted to said bezel.

9. A single-locked, torqued, error proofed for installation, chuck free helical head restraint guide comprising:

a head restraint guide assembly further comprising at least one stem and a bezel assembly; said stem further comprising a helix at one end of said stem and a  
20 multi-point socket head or open wrench flats and crush ribs at the other end;

a motor vehicle passenger seat comprising upper cross member of back frame with upper and lower openings; and

a head restraint assembly further comprising head restraint posts and a head restraint pad.

10. The single-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 9, wherein said helix on said stem fits into a  
5 corresponding opening on said upper cross member of back frame of said motor vehicle seat; said stem binds said upper cross member of back frame against said crush ribs.

11. The single-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 10, wherein said stem with said helix are screwed to a stop into said corresponding opening on said upper cross member of back frame  
10 before foam and trim are assembled; said helix further comprises ratchet teeth to prevent untorquing of said stem.

14. The single-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 9, wherein said bezel assembly fits into said stem after said stem is installed into said upper cross member of back frame and after said  
15 passenger seat of motor vehicle is foamed and trimmed.

15. The single-locked, torqued, error proofed for installation, chuck free helical head restraint guide as in claim 12 wherein said stem further comprises tracks for correct installation of said bezel assembly.

16. The single-locked, torqued, error proofed for installation, chuck free  
20 helical head restraint guide as in claim 13, wherein said bezel assembly further comprises a tab and locking teeth.

17. The error proof installation of bezel for a single-locked torqued, error proofed for installation helical head restraint guide comprising:

a bezel assembly; and

a stem with tracks installed into the upper cross member of a back frame  
of a passenger seat in a motor vehicle.

16. The error proof installation of bezel as in claim 15, wherein said bezel  
5 assembly slides into said stem at an angle utilizing said tracks to ensure proper alignment.

17. The error proof installation of bezel as in claim 16, wherein said bezel  
assembly further comprises a tab with locking teeth to prevent rotation/upward force  
within said stem.